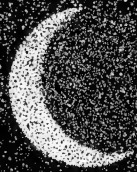


REVEAL THE TRUTH,
AND PEOPLE WILL ALWAYS TALK ABOUT YOU.



HERE'S WHAT THEY SAY:

"Software with a graphic interface that guides you through your work, helps you think, entices you to explore, and makes relationships between pieces of information come alive."

—MacUser

"There is probably no other program with comparable ability to examine the impact of outliers or anomalous data points."

—MacWorld

"Seamless integration of graphical and numerical analyses make the exploratory approach painless and largely intuitive."

—InfoWorld

"I found *Data Desk* to be one of the easiest, most enjoyable, and yet most powerful programs I ever used."

—Macazine

"Ideal for exploratory analyses; that is, for understanding the meaning of your data."

—MacWeek

"Brings so much power to the desktop that only the most complex analyses will have to be left for mainframes and special-purpose programs."

—Mac Guide

What is Data Desk?

Data Desk is the first and only true exploratory data analysis program. Developed by EDA pioneer and Cornell professor Paul Velleman, Data Desk provides you with a dynamic Macintosh environment for visualizing and exploring your data. Of course, Data Desk has a full range of statistics, but the real strength of the program is in what it allows you to do. Through interactive plots and statistics, you are easily able to search through your data, find trends and patterns, and discover the right questions to ask. Try Data Desk on your own Macintosh and find out how it lets you understand your data in a whole new light. *Fill out and mail the coupon on back for your Data Desk test flight.*

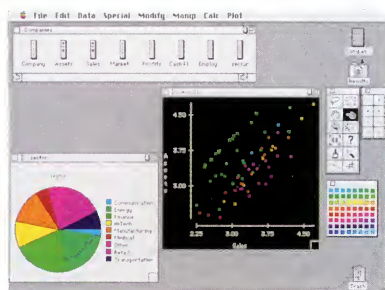
What is Exploratory Data Analysis?

(Excerpt from a *MacWeek* review by David Brandt)

Good statistics programs for the Mac have been a long time in coming. The first tentative offerings were mainly ports of weak programs from non-Apple business computers. The best of the lot exemplified the "mainframe on micro" philosophy.

Data Desk takes a very different and highly Mac-like approach. It arises out of a different intellectual tradition, one that assumes that the data analyst needs a program that does more than data transformations and inferential statistics.

Data Desk is the product of an intellectual tradition that predates the Macintosh by about 20 years. This framework, which is known as exploratory data analysis (EDA), coalesced around two seminal books written in the 1970s by Princeton statistics Professor John W. Tukey, the most influential data analyst of the modern era. Tukey argued that the data analyst should proceed much in the manner of a detective trying to solve a mystery. *(Continued on back)*



In addition to one, two and three dimensional plots, Data Desk can utilize symbols and color to represent variables or other aspects of a plot.



Since plots and windows are "hot," we can use a Data Desk HyperView to remove a variable from a regression and watch the affect on the residuals plot.

Buyers Say... (as reported by *PC Week*, 4/2/90)

"The strongest uses of Data Desk are regression and exploratory data analysis—when you're not sure what you are going to find," said Eric Ziemer, research manager for Illinois Bell Telephone Co., in Chicago, who analyzes such information as customer usage and line-activity data.

"With Data Desk it's much more of an interactive exploratory analysis," Ziemer said. "You can always work out of a path of analysis, [whereas] changing directions can be very difficult in other packages."

When scrutinizing the analyses, Ziemer can use Data Desk to document analytical decisions and leave a clear audit trail, he said.

"The graphics are intended as working graphics for statisticians," said Ziemer, who added that for presentation-quality graphics, data can be transferred into Microsoft Corp.'s Excel or Computer Associates International Inc.'s Cricket Graph.

Colin McKenna, a researcher at McKenna Associates, a family counseling center in Lafayette, Calif., uses Data Desk with Odesta's Double Helix database.

"The key to its ease of use is the ability to choose different selector variables," said McKenna, who added that the product has an "excellent tutorial" for non-statisticians.

Reviewers Say...

"Data Desk sets new standards for the integration of statistical tools with the Macintosh graphical user interface. From its opening screen, Data Desk anticipates the user's needs and satisfies them with exceptional speed and flexibility." *PC Week* Peter Coffee, April, 2, 1990.

"Data Desk is superbly integrated, and its smooth operation gradually becomes intuitive. Once you've used the program enough to discern its logic, you can work quickly and easily." *InfoWorld* Alan Fridlund, March 19, 1990.

"Data Desk does something that no other statistics program does as well. Specifically, it lets non professionals investigate and find the same relationships in data as a professional statistician would. That's a large claim, but it's a fact that Data Desk lets you perform better analysis, with less formal background, than does any other Mac statistics product. For the vast range of possible users who are neither professional analysts nor analysts-in-training, Data Desk 3.0 offers the shortest path from numbers to real-world conclusions." *MacWorld* Charles Seiter, June 1990.

Try Data Desk Yourself...

Just fill out and return the coupon on the back to receive your own Macintosh test flight kit. This demonstration copy of Data Desk will give you a sample of the true power of exploratory data analysis with Data Desk. *Return the coupon today for your own test flight kit.*

Data Desk vs. the Competition

An excerpt from a *MacWorld* review
by Charles Seiter

The competition between Data Desk and other Mac statistics programs has a curious history. Data Desk started as a single-minded proponent of exploratory data analysis (EDA); it expected the user to graph all data in several different styles and use plots as the basis of most analysis. The other programs, by contrast, were mostly table-based products designed to receive numbers from a spreadsheet and grind that data through different kinds of textbook analysis. Through the years newer Mac statistics offerings have included more EDA features, while Data Desk stayed well ahead of the pack in exploratory graphics and has added more traditional statistics as well. Version 3.0, the newest release, offers innovative use of color as a plot variable and a complete General Linear Model unit, carefully integrated with the rest of the program.

Vital Statistics

Data Desk has always included standard summary statistics, regression analysis, correlation statistics for non-parametric analysis, and principal components analysis. Data Desk allows unlimited variables and variable values, stored in the program's own relational structure, and a huge library of menu-based transformations. A feature called HyperViews gives context-based suggestions to pursue on appropriate lines of analysis.

Data Desk now includes a linear modeling section for analysis of variance and covariance (n-way ANOVA and ANCOVA) that accommodates most experimental designs, including unbalanced

EDA continued from previous page.

Instead of investigating hypotheses that were formulated independently of the data, the data analyst uses an open-ended exploratory approach with few preconceptions. This approach relies heavily on graphical methods and numerous provisional and informal analyses. In contrast to the traditional approach, analyses are interactive; information gathered at each stage is used to refine subsequent analyses.

This approach requires a new kind of statistics program, one that supports interactive and dynamic graphical methods. Although EDA is historically unrelated to the microcomputer revolution, the microcomputer, especially the Macintosh, is the ideal platform for data analysis programs.

Developed by Cornell Professor Paul Velleman, a former student of Tukey's, Data Desk is the first program that combines dynamic and interactive graphics with conventional descriptive and inferential statistics. The combination is synergistic. Graphical methods can be used to suggest hypotheses that can then be tested using traditional statistical methods and the graphical methods are ideal for studying the adequacy of statistical models.

designs and designs with missing cells. The modeling section is especially useful because it accepts sets of data points selected and cut from Data Desk with the lasso tool—this makes ANOVA an efficient follow-up to insights developed during graphics manipulation. As an aid to beginners, linear modeling is performed from a Design Window that steers you through the initial model setup.

FIND OUT THE TRUTH FOR YOURSELF

☐ YES, I want to try Data Desk on my own Macintosh. Send me _____ of your Data Desk test flight disks. I enclose my check, money order or credit-card authorization of \$5 per disk.

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